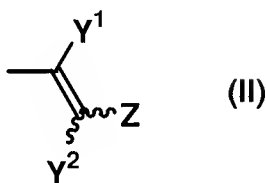


a.) Amendment to the Claims

Claim 1 (Cancelled).

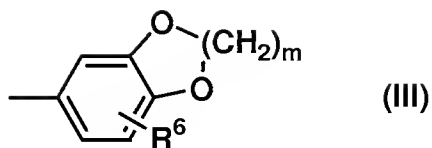
2. (Currently Amended) The ~~composition according to claim 1,~~
method according to claim 9, wherein X^1 and X^2 each is an oxygen atom.

3. (Currently Amended) The ~~composition according to the claim~~
~~1 or 2,~~ method according to claim 2 or 9, wherein R^4 is represented by formula (II):



4. (Currently Amended) The ~~composition~~ method according to claim
3, wherein Y^1 and Y^2 are both hydrogen atoms.

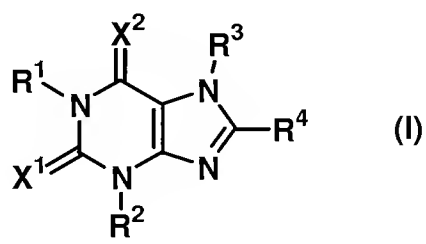
5. (Currently Amended) The ~~composition~~ method according to claim
3, wherein Z is substituted or unsubstituted aryl or a group represented by formula (III):



(wherein R⁶ represents a hydrogen atom, hydroxy, lower alkyl, lower alkoxy, halogen, nitro or amino; and m represents an integer of 1 to 3).

Claims 6-8 (Cancelled).

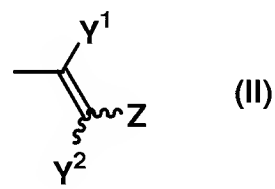
9. (Currently Amended) ~~The method according to any one of claims 6 to 8, wherein the higher brain dysfunction is~~ A method for preventing and/or treating an impairment of higher brain function selected from the group consisting of memory, thinking, recognition, action and learning, comprising administering to a patient in need thereof an effective amount of a xanthine derivative represented by formula (I)



wherein

R¹, R² and R³ independently represent a hydrogen atom, lower alkyl, lower alkenyl, or lower alkynyl;

R⁴ represents cycloalkyl, -(CH₂)_n-R⁵ (wherein R⁵ represents a substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group; and n represents an integer of 0 to 4) or a group represented by formula (II):



wherein Y¹ and Y² independently represent a hydrogen atom, halogen or lower alkyl; and Z represents substituted or unsubstituted aryl, or a substituted or unsubstituted heterocyclic group); and

X¹ and X² independently represent an oxygen atom or a sulfur atom,

or a pharmaceutically acceptable salt thereof.

10. (Currently Amended) The method according to ~~any one of claims 6 to 8~~, claim 9, wherein the ~~higher brain dysfunction~~ impairment of higher brain function is selected from the group consisting of agnosia, amnesia and apraxia.

11. (Currently Amended) The method according to ~~any one of claims 6 to 8~~, claim 9, wherein the ~~higher brain dysfunction~~ impairment of higher brain function is a memory impairment.

12. (Currently Amended) The method according to ~~any one of claims 6 to 8~~, claim 9, wherein the ~~higher brain dysfunction~~ impairment of higher brain function is a learning impairment.

Claims 13-15 (Cancelled).

16. (New) The method according to any one of claims 9 to 12, wherein the xanthine derivative is (E)-8-(3,4-dimethoxystyryl)-1,3-diethyl-7-methylxanthine.